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TRAIL & LANDSCAPE



*A Publication Concerned With
Natural History and Conservation*

The Ottawa Field-Naturalists' Club

TRAIL & LANDSCAPE

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The Ottawa Field-Naturalists' Club

Founded 1879

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Objectives of the Club: To promote the appreciation, preservation and conservation of Canada's natural heritage; to encourage investigation and publish the results of research in all fields of natural history and to diffuse the information on these fields as widely as possible; to support and co-operate with organizations engaged in preserving, maintaining or restoring environments of high quality for living things

Club Publications: THE CANADIAN FIELD-NATURALIST, a quarterly devoted to reporting research in all fields of natural history relevant to Canada, and TRAIL & LANDSCAPE, a quarterly providing articles on the natural history of the Ottawa Valley and on Club activities.

Field Trips, Lectures and other natural history activities are arranged for local members; see "Coming Events" in this issue.

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OCT 21 2016

Welcome New Members

Ottawa Area

Sophia Bodorik & Family
Sheryl-Elaine Brazeau
Dilip Chinnakonda & Family
Nicolas Conroy
Sheila Craig
Matthew Dineen & Family
Arlen Duquette
Mark English
Erin Dorgan
Lisa Haynes
Heidi Hopkin & Family
Katherine Kimbell

Linda Landry
Roger Letourneau
Katherine Lorimer
Paul Martin & Family
Mark McGovern & Family
Annie Yin Yee Ng
Eileen Pike
Jean Shepherd
John Slater & Family
Michelle St-Germain
J. David Wright & Family

Gatineau Area

Jasmin Forgues
Monique Boivin

Ontario

Eric Shoesmith
Rose Stewart & Family
Rosanne Vanschic

Other Countries

Anni Auge/Paul Prior
Michael Wilson & Family

Henry Steger
Chair, Membership Committee
August 2016

Save the Date: 2017 OFNC Awards Night on February 25, 2017

Annie Bélair

The annual OFNC Awards Night will take place earlier than usual in 2017: it will be on Saturday February 25, 2017. It will start at 7:00 p.m.

The location will be the same: St. Basil's Parish Church, 940 Rex Avenue, Ottawa.

More information will be provided in the first issue of *Trail & Landscape* in 2017.

Call for Award Nominations

The OFNC is looking for nominations for individuals or groups (members and, in several cases, even non-members) who, by virtue of their efforts and talents in support of the Club or natural history appreciation and conservation, are deserving of special recognition. There are seven categories (see next page, and for more details see <http://www.ofnc.ca/awards.php>).

The deadline to submit nominations is **November 30th**.

If you would like to nominate someone for an award, please send an email to the Chair of the Awards Committee at ofnc@ofnc.ca containing the requisite supporting information (type of award, name of nominee, and reasons for nomination that support the award criteria) as well as your name and phone number. Nominate as many individuals as you wish, but be sure to give your reasons. If necessary, the Awards Committee may seek out more information on individuals nominated.

OFNC Awards and criteria:

Honorary Membership: In recognition of outstanding contributions by a member, or non-member, to Canadian natural history or to the successful operation of the Club.

Member of the Year: In recognition of the member judged to have contributed the most to the Club in the previous year.

George McGee Service Award: In recognition of a member or members who has (have) contributed significantly to the smooth running of the Club over several years.

Conservation Award – OFNC Member: In recognition of an outstanding contribution by a member (or group of members) in the cause of natural history conservation in the Ottawa Valley, with particular emphasis on activities within the Ottawa District (the area within 50 km of the Peace Tower in Ottawa).

Conservation Award – Non-member: In recognition of an outstanding contribution by a non-member (or group of non-members) in the cause of natural history conservation in the Ottawa Valley, with particular emphasis on activities within the Ottawa District (the area within 50 km of the Peace Tower).

Anne Hanes Natural History Award: In recognition of a member who, through independent study or investigation, has made a worthwhile contribution to our knowledge, understanding and appreciation of the natural history of the Ottawa Valley. The award is designed to recognize work that is done by amateur naturalists.

Mary Stúart Education Award: For members, non-members or organizations, in recognition for outstanding achievements in the field of natural history education in the Ottawa Region. Potential recipients would include museum personnel (both professional and volunteer), biology teachers, talented and dedicated field trip leaders, authors popularizing local natural history, and other educators of children or adults.

Should you wish to see who the past winners of Club awards were, visit <http://www.ofnc.ca/awards/winners.php>.

OFNC Markers at McKay Lake Revisited Forty Years Later

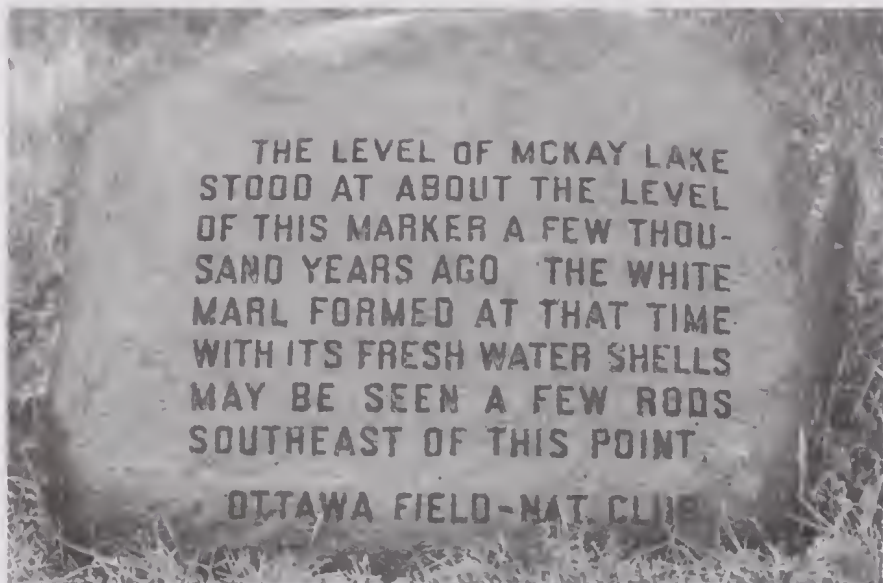
J. Anthony Keith and Iola Price

In 1930, the Ottawa Field-Naturalists' Club installed two markers to record the age and level of McKay Lake a few thousand years ago and to note the associated deposit of white marl. One marker sat on the hillside (locally known as the Hillsdale Triangle) under the jurisdiction of the National Capital Commission northeast of the Hillsdale Bridge, where the footpath to Sandridge leads off Hillsdale. This marker was made of concrete fashioned to look like a boulder. Joyce Reddoch's 1976 *T&L* article recounted the history of this marker and a similarly-fashioned one on the shoreline of McKay Lake. Edmond (2005) also provided historical information about the markers and Club history and excursions to investigate the lake and its surroundings. One winter, the Village of Rockcliffe Park snowplow accidentally knocked the Hillsdale Triangle marker, possibly causing the cracks first shown in Reddoch's article.



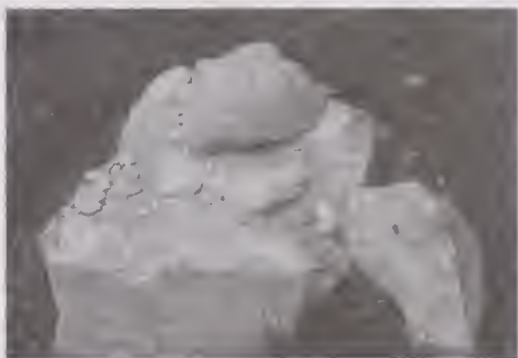
Map of McKay Lake in Rockcliffe Park; ★ indicates location of markers

Over the years, the Heritage Committee of the Rockcliffe Park Residents Association has patched the cracks, but the freeze-thaw cycle gradually increased the damage to the point that two words were illegible. So in 2013, the committee decided to replicate the wording on a real granite boulder, using a different technique – direct engraving on stone. A boulder that closely matched the shape of the original was found in the village and transported to the site. Stonemason Alain Joanisse, a third-generation stone engraver who works extensively across eastern Ontario, did an excellent job of replicating, on the boulder, the wording and layout of the original. We have placed the boulder just to the east of the original marker, on city land (Keith, 2013).



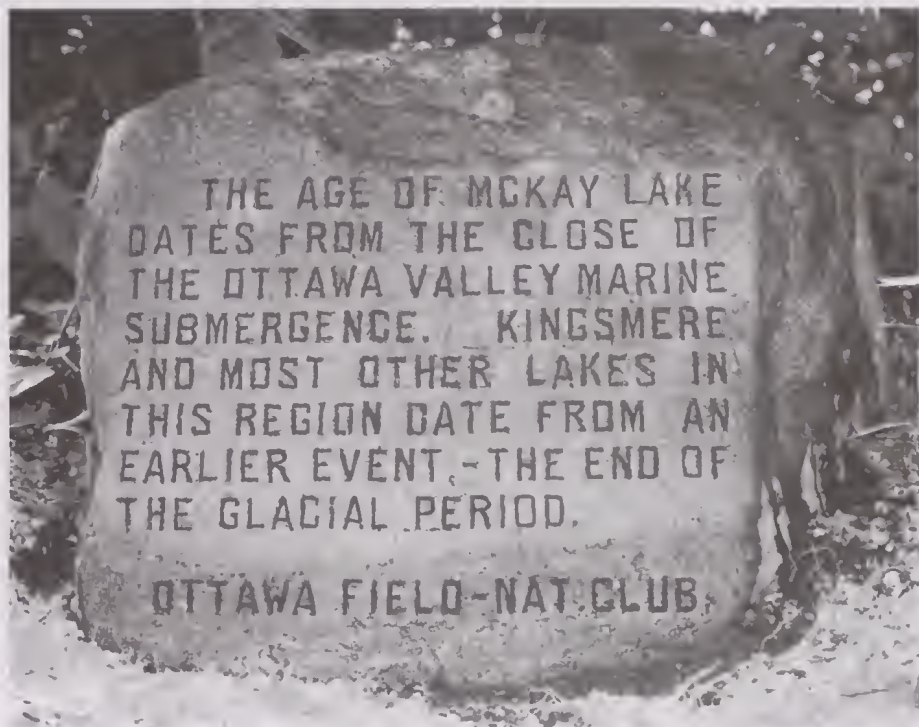
New engraved granite boulder placed in 2013

This summer, the original marker finally fell to pieces and we are happy that a duplicate was put in place before that happened.



1930 concrete marker in 2016

The second 1930 marker, adjacent to McKay Lake on the edge of Hillsdale Road, is protected from snowplow accidents by a sturdy fence. Over the years, soil had built up to cover the club's name at the bottom of the marker; we will now work to keep the marker and its message more visible.



1930 concrete 'stone' marker located on the shoreline of McKay Lake in Rockcliffe Park

References

- Edmond, M. *Rockcliffe Park: A History of the Village*. Ottawa. The Friends of the Village of Rockcliffe Park Foundation. 2005.
- Keith, J.A. "Three New Heritage Markers Grace Various Village Locales." *The Rockcliffe News* 13(6): 7.
- Reddoch, J. "Historical boulders." *Trail & Landscape* 10(3): 68-73.

Summary of Bird Observations from the Ottawa Area for 2015

Gregory Zbitnew

Note: All birders are encouraged to submit their observations to eBird.ca. This is the best tool available to access current information and to preserve historical information, and this summary would have been very difficult to prepare without it.

OVERVIEW

2015 was one of the better years for birds in recent years, at least in terms of rarities and new sightings for the region. For the first time in recent memory, southern Ontario birders had a few twinges of envy, and some were forced to come to Ottawa on multiple occasions to see our rarities. An estimated 275 species were seen in the region as a result of the cumulative efforts of hundreds of birders and photographers.

There were four first records for Ottawa in 2015:

- **Barnacle Goose**
- **Little Egret**
- **Mountain Bluebird**
- **Bullock's Oriole**

There were also about 10 other significant rarities.

Just outside the OFNC's 50-km area there were two major rarities:

- **Pink-footed Goose**
- **Smew**

Weather, as always, was a major factor in both the flow of birds and the activities of birders. After a fairly mild and snowless start to the year, winter became steadily more brutal; February had no thaws. There were a few lingering birds to chase early in the new year, but the watercourses rapidly froze up.

The severe cold of February eased as March arrived, but spring was rather slow to arrive, and while birds trickled in with some significant movements in late March and early April, it was not until the second week of April that the flooding and the waterfowl population in the east peaked. The final breakup of the Ottawa River was on April 16-17.

Rarities started to show up in mid-April, and there was something to chase until mid-July, but songbird migration was rather mediocre, with nothing in the way of fallouts. There was some decent, although brief, shorebirding in the spring, and unlike 2014, water levels were generally quite favourable for good shorebirding from mid-August on. A fairly regular stream of rarities resumed in September and continued until the end of the year. Fall songbird migration was generally good although lacking in rarities, and it may have been enhanced by the record warm September. The record warm December was definitely a huge factor in allowing so many birds to linger, given the virtually ice-free and snowless conditions almost until the end of the month.

Ducks and other waterbirds

Some of the notable lingerers this winter were **Pied-billed Grebe** on the Rideau River near Hurdman until early January, and **Northern Pintail** there and also in Kanata as late as early February. A **Northern Shoveler** was in Kanata until the end of February, **Greater Scaup** in Britannia until mid-February, and **Long-tailed Duck** on the Ottawa River until the end of February.

The **Snow Geese** flock peaked at 75,000 on April 12 in the Cobb's Lake Creek Flood plain. As usual, there were a few sightings of **Greater White-fronted** and **Ross's Goose**, but otherwise there was little notable during the regular spring migration period. A **Red-throated Loon**, scarce in the spring, was at Britannia on the 3rd. **Trumpeter Swans** appeared near Carleton Place March 28-April 1, and then made two brief appearances near Munster on April 12, and on Franktown Road September 26.

The first of the year's sensational finds were 2 **Barnacle Geese** (the first for the Ottawa region) on the Mississippi River southeast of Galtta, seen May 3-4 by quite a few observers.

A few summering waterbirds provided a bit of diversion while



Red-throated Loon. Photo by Giovanni Pari.

birders were chasing rarities. A **Snow Goose** was at St Albert most of July. Up to two **Common Goldeneye** were near Remic Rapids most of June into July, a **Brant Goose** was at Andrew Haydon Park in early July, and a **Eurasian Wigeon** was at McLaurin Bay on July 30-August 1.

Shirley's Bay proved to be a great spot for waterbirds this fall. Mixed flocks of 2000+ birds were seen at times, with numbers and variety peaking in mid-late October. At times it was possible to see all three species of **Scoters**, **Redhead** and **Long-tailed Duck** as well as the elusive **Canvasback**. The Ottawa River east of Gatincau was not nearly as good. However, **Eurasian Wigeon** were at Plaisance on October 20 and at Baie Noire during much of November.

A **Harlequin Duck** at Deschênes Rapids on October 20-30 was also notable.

The record warm December resulted in the rivers being completely open until the end of December. While most birds had already cleared out, among the interesting lingerers were four species of geese including **Greater White-fronted Goose** in the small pond at Andrew Haydon Park, the latter being new to the Ottawa Christmas Bird Count (CBC). Two **Ross's Geese** were at Embrun on November 11, and one was at Winchester on December 6.

The Ottawa River kept giving into December. On December 10, a light morph **Northern Fulmar**, a rare visitor not seen for 20 years, was at Andrew Haydon Park. Astonishingly enough, another was found in late December in Kanata and was rescued.

Farther afield and outside the 50K circle (but close enough to chase), there were two major rarities. The first was a **Pink-footed Goose**, a first record for Ontario, seen at the Laflèche Landfill east of Casselman on and off from late October to mid-December. It was difficult to spot as it was in a flock of over 100,000 Snow Geese. The second rarity was a **Smew**, a very rare Eurasian visitor, seen on the St. Lawrence River near Morrisburg in late December.

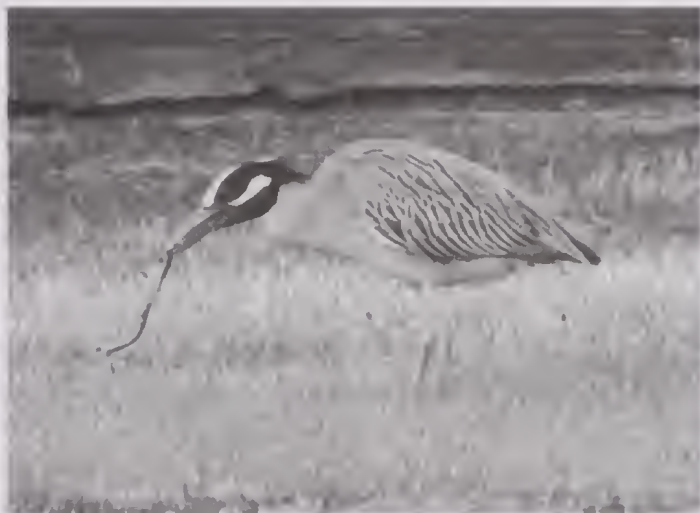
Game birds

Gray Partridge continued their long-term decline. In January through to early February, a small flock was seen regularly near Kinburn, but that was it aside from two other sightings east of Ottawa in January-February.

Waders

Wading birds put Ottawa on the map in 2015. First, a **Little Blue Heron** was seen briefly at Dow's lake on April 16. Next came a pair of **Glossy Ibis** at the Marais des Laïches, seen by many observers on April 19.

The next rarity was a **Yellow-crowned Night Heron**, seen on May 23-June 8 southwest of Carp. Initially it was tough to find, but finally settled upon a lawn starting on June 2, and was seen by quite a few.



Yellow-crowned Night Heron eating an earthworm.

Photo by Richard Killeen.

On June 2, a **White-faced Ibis** appeared briefly at the Giroux Road Ponds, but this second record for Ottawa was eclipsed on the same day when a **Little Egret** showed up in Carp. This bird was the star of the year, not just because it was the first Ontario record of this Eurasian species (an ABA code 4 bird), but because it stayed around for so long, giving everyone who wanted a chance to see it.



Little Egret, June 2, 2015, Carp. Photo by Richard Killeen.

Initially it disappeared after the first sighting, disappointing birders who came in from all over Ontario. However, it eventually started popping up in various places from Kanata to Manotick before settling into a kind of a routine at Andrew Haydon park, sometimes being seen roosting on Conroy Island in Gatineau. Ultimately it stayed until July 13, bringing dozens of birders from all over Ontario.

Things were relatively quiet until late October, when a **Cattle Egret** showed up near Burritt's Rapids, being rather co-operative from October 30 to November 9.

Lastly, a late **American Bittern** was near Burnt Lands Provincial Park on November 3.

Vultures, Hawks and Falcons

The best sighting of the year was a **Black Vulture** seen briefly in the west end on April 6. **Turkey Vultures** lingered into early November near the Giroux Road ponds.

Most notable were at least three **Gyrfalcons** in the area. One was seen briefly on the Breckenridge-Dunrobin CBC January 3, while two others were seen on the Forêt Larose CBC also on January 3, with one of these being seen irregularly near the Lafleche Landfill just east of Casselman until March 1. This bird was just outside the OFNC's 50K region. A **Gyrfalcon** was also seen on January 18 near Hallville; possibly it was the same bird.

Marsh and Shorebirds

The spring **shorebird** season produced a few modest rarities: **Hudsonian Godwit** in St. Albert on 28 May-2 June, and **Marbled Godwit** at a temporary pond on Greenbank Road from May 28-June 1, and best of all, an **American Avocet** appeared at the mouth of Pinecrest Creek on June 21-25.

Some other scarcer **shorebirds** this spring were:

- **Short-billed Dowitcher:** A few scattered sightings May 16-24
- **Wilson's Phalarope:** A number of sightings from May 24-June 2.
The one at the Richmond Conservation area was the easiest to observe.
- **Red-necked Phalarope:** Winchester, Britannia, St. Albert and Giroux Road ponds, from May 22-June 2.
- **Ruddy Turnstone:** Scattered sightings from May 24-31.

Fall shorebird migration was decent this year, as water levels on the Ottawa River were favourable. A **Whimbrel** was at Andrew Haydon Park on July 19, but generally numbers and variety peaked in mid-late August. Shirley's Bay was the best place: up to 200 shorebirds at a time were there.

Some of the less common species made rather brief appearances. Among the notable:

- **Red Phalarope:** Two sightings, October 11 and 17 at Shirley's Bay;
- **Ruddy Turnstone:** A few scattered sightings from August 19 to September 19;
- **Stilt Sandpiper:** This was a regular at Shirley's Bay from August 20 to September 12. There was one sighting at Petrie Island in September and a couple from Andrew Haydon Park on August 10-20;
- **Red-necked Phalarope:** Parc Brébeuf, Shirley's Bay, and Moodie Drive, from August 19-September 13;
- **Wilson's Phalarope:** A single sighting on July 19 in Winchester;
- **Baird's Sandpiper:** It was seen irregularly at Shirley's Bay from August 11- September 12, and once at Constance Bay on August 28;
- **Purple Sandpiper:** A single early sighting at Shirley's Bay on October 18-19;
- **Short-billed Dowitcher:** Most of October at the Richmond Conservation area.

Some notable lingerers were:

- **Long-billed Dowitcher:** Seen as late as October 25 at Richmond, this was a record late date for the region;
- **Spotted Sandpiper:** Seen as late as November 12 at Shirley's Bay and Andrew Haydon Park;
- A **Killdeer** was seen on December 25 on Kinburn Sideroad.

Jaegers, Gulls, Terns

The year started with a **Thayer's Gull** among the usual gulls at the Trail Road landfill on January 5, but the gulls moved out rapidly as the cold weather settled in.

The usual **Arctic Tern** flyby in late May-early June was enhanced by two **Franklin's Gulls** at Britannia Point on May 30, also seen at St. Albert on May 31.

A **Sabine's Gull** was at Shirley's Bay on September 13 during some blustery weather. A record late **Little Gull** was at the Moodie Drive ponds on December 9.

This was the year for **Jaegers** in Ottawa. The excitement started with a **Parasitic Jaeger** at Ottawa Beach, present from September 13-29, and it was unusual for how long it stayed and the great views it gave. Then came the **Long-tailed Jaeger** near Winchester on September 19-20, again giving fabulous views.



*Long-tailed jaeger, September 20, 2015, north of Winchester.
Photo by Giovanni Pari.*

Cuckoos and Owls

The only other notable bird was a **Yellow-billed Cuckoo** that was near Morris Island on 16-18 June. There were a few other sightings in Gatineau Park during the summer, and a late sighting at Richmond on October 3.

Regionally, eight species of owls were seen. There were two good winters for Snowy Owls, 2014-15 and 2015-16, in their traditional locations. Otherwise there were no winter owls except for a single sighting of a **Northern Hawk Owl** in the northeast of the region.

Woodpeckers

There was a population explosion of woodpeckers in the winter of 2014-15, possibly the result of huge numbers of dead White Ash trees. This explosion was not just of the common species: of special interest were the northern woodpeckers. Up to two **American Three-toed Woodpeckers** were regularly seen in Aylmer for most of the winter, until April 3, and there was another seen once in Cumberland. **Black-backed**

Woodpeckers were all over the region, possibly 20 or more, the last one seen in early May.

The winter of 2015-16 saw normal levels of **Woodpeckers**.

A late sighting was a **Yellow-bellied Sapsucker** on December 20 in Pakenham.

Flycatchers

A **Tropical/Couch's Kingbird** was found and photographed on June 27, on Upper Duck Island; as of this writing it could not positively be identified to species.

Birders had better luck with a **Western Kingbird** at Fletcher Wildlife Garden, there from September 27-October 4.

A very late **Eastern Phoebe** was near Earl Armstrong Road on December 18-19.

Vireos – Wrens

The always tough-to-identify **Yellow-throated Vireo** had three sightings: May 9 near Luskville, August 26 on Greenbelt Trail 10, and September 10 at Britannia. The only other really notable VIREO sighting was a very late **Philadelphia Vireo** on November 11 on Britannia ridge.

Carolina Wren put in its usual sporadic appearances here and there, and there was a very late **Marsh Wren** at the marsh at the north end of Champlain St. in Orleans on November 15. A late **Winter Wren** was at Britannia on December 20. There were scattered sightings of **Sedge Wren** but it was regular at only a handful of spots, on Conley Road starting in late May and near Bristol Mines in early June.

There were two sightings of **Blue-gray Gnatcatcher**, July 31 at Shirley's Bay and August 13 in Aylmer.

Thrushes – Waxwings

The thrush family had some very interesting sightings in 2015.

The highlight was a **Mountain Bluebird**, the first record for Ottawa, found on Cambrian Road on November 29-30. After disappearing for nearly 2 weeks, it was found again near Richmond and was present until December 28.



*Mountain Bluebird.
Photo by Giovanni Pari.*

There were some notable late sightings in the year:

- A **Veery** at Shirley's Bay until October 30.
- A **Wood Thrush** at the Experimental Farm on December 20, being the first record for the CBC and by far the latest recorded in the region.
- A **Swainson's Thrush** was at Lac Leamy in Gatineau, seen on the December 19-20. Possibly the same bird was found on December 31 at Brewery Creek, lingering until January 3.

A few other late sightings were:

- A **Brown Thrasher** was near Luskville on December 2 and near Kanata on December 31.
- An **American Pipit** was near Chrysler on December 6.

Bohemian Waxwings were very plentiful the winter of 2014-15. Flocks of up to 3000 were seen in early April.

Warblers

Songbird migration was unfortunately, and typically these last few years, lacking in significant fallouts and rarities in the spring. Exceptions were a male **Prairie Warbler**, photographed on May 9 on Giroux Road, and a **Cerulean Warbler** in Pakenham in mid-May. By May 14 all the regular warblers had been seen.

Fall Warblers were plentiful. August 31 was a particularly good day and was probably the peak. That day, 19 warbler species were seen by a single person in Britannia, including a rare-in-the-fall **Golden-winged Warbler**. Most notable was a **Blue-winged Warbler** on September 8-10 at Britannia, possibly the first fall record.

There were some very late sightings:

- **Yellow-rumped Warbler** lingered near the Green's Creek water purification plant December 20-24 (and subsequently seen as late as the following February)
- 2 **Common Yellowthroat** on December 10 west of Plaisance
- A very late **Orange-crowned Warbler** was at Britannia on November 5.
- A record late **Cape May Warbler**, near the Green's Creek water purification plant from December 20-22, and a first for the Ottawa CBC.



Cape May Warbler. Photo by Giovanni Pari.

Tanagers – Blackbirds

Three separate sightings of **Summer Tanager** were quite unusual. A singing male was in Carp on July 9, and one was in Britannia on August 16. But most incredible was a third one, coming to a feeder in New Edinburgh from about December 24 until February of the next year.

A **Rose-breasted Grosbeak** was at a feeder on McCordick Road on December 11 or 12.

The rarest Sparrow of the year was a **Le Conte's Sparrow** at Andrew Haydon Park on the October 5, among the **Nelson's Sparrows** which were there from September 20-October 6.

A **Baltimore Oriole**, vry rare in the winter, was at a feeder in the Fallowfield area on December 12-26. The star among the icterids, however, was a **Bullock's Oriole**, the first record for Ottawa, which was found in Pakenham on November 29 and was present until it was rescued, being near death, in early January. It subsequently recovered and was released the next spring. This bird brought a stream of birders from all over Ontario.



Bullock's Oriole. Photo by Giovanni Pari.

Finches

Common Redpoll and **Pine Siskin** were reasonably plentiful, **Hoary Redpoll** was somewhat scarce, but both **Red** and **White-winged Crossbill**, as well as **Pine Grosbeak** were very scarce, less than 10 sightings each of these three scattered over the region, with no consistent spots. **Evening Grosbeak** was scarce in general, except for a fairly reliable spot in Larose Forest.

Bird Locating. It's Right There... In The Green Tree! Getting others onto that bird

Chuck Almdale & Lillian Johnson

(Introductory Note: I had the good fortune to bird with Chuck and Lillian two years ago. They were great company and skilled birders. This article is so appropriate I asked Lillian for permission to re-print. - Roy John)

For many of us birding is both fun and art. As with any art, the better you get, the more you enjoy it and vice versa. But like any art, there are certain techniques you can learn that will enhance both your enjoyment and ability to share that enjoyment with others. Many of these techniques and skills are covered in field guide introductions or magazine articles. Neglected – until now – is the skill of getting others onto the bird you've found. The joy of finding a new, interesting or beautiful bird increases when you share it with others. But you can't share the joy if you can't help others find the bird. In our years of birding, we have personally made and witnessed others make every single error mentioned below, and we find the suggested techniques to be the most useful and easily learned. Of the five basic points presented here, the final is the least known, most difficult to learn and gets the longest explanation.

Five Basic Points

Scope: If you have a scope, it's easy to put it on the bird and let others look through it. This works well with birds like shorebirds, ducks or resting raptors which don't move around quickly; it's nearly useless with birds flitting through foliage. When the bird is cryptic, partially hidden or distant and small, give useful additional hints: look in the upper left portion of the field of view; behind that vertical snag, at the base of the red rock. Knowing which part of the scope's view contains the bird can quickly ensure a useful look. (When a group of people are waiting to use the scope, it's good birding etiquette to take the briefest look possible, yet still see the bird. However, if you just can't find the bird in "a reasonable" amount of time, move aside and let others take a first quick look, before returning to the scope to try again. Second looks are for lingering.) If people of widely varying heights will likely be using your scope, the 45°-angled eyepiece is easiest for everyone, especially tall people who won't have to stoop so much.

Make sure they are looking in the same direction as you are: If possible, just glance around. Birders are often looking in completely different directions while arguing about what they're seeing. This happens so frequently that it's a standing joke. A quick "Stand behind me and look where I'm looking" can at least get them into the general area.

Clock Face: In many situations, using a clock face can aid speedy location. In an open area, twelve o'clock is always straight ahead, six is directly behind, three and nine are 90 degrees right and left, respectively. Other hours fall in between. For a vertical object such as a tree, twelve is the top, three is $\frac{1}{2}$ way down on the right side, and so on. On a boat or in a car (or line of cars), twelve is always straight ahead down the road, six is straight behind down the road, and so on. It should go without saying (but won't) that 12 o'clock is not simply the direction in which you happen to be looking at that very moment. (I once had to ask a professional bird tour leader why everything was at 12 o'clock.) If you're young and don't know how to read an analog clock, now is a good time to learn.

Laser Pointers: Pen-sized lasers are now available in various powers and produce either a red or a (preferred) green beam. Many professional tour guides use them; not all are equally adept at using them. The key is to start from something obvious like a large rock or tree trunk. Starting somewhere close to the bird is far less important. Once everyone sees your laser "dot", they can follow it as you move it along trunk, limb and twig to the bird. Never shine the beam on the bird. Keep the dot where the bird cannot see it so you don't startle it. Just below the bird works well, as does slowly circling the bird. The dot will display better on solid objects like trunks or twigs than on leaves. Avoid jerky movements. In a forest of leaves, a moving laser beam scatters over many yards. Birders more than a few feet to either side of the pointer-holder see only a series of bright dots scattered over many leaves and won't have a clue as to which dot is nearest the bird. Warn the viewers of this scattering and reduce beam movement to a minimum. In southern California where the sun always shines and forests can be thin, lasers aren't of much use. An alternative low-tech solution is a small hand mirror of glass or polished metal, for which you will need the friendly cooperation of the sun.

Start from something obvious, easily locatable or describable: How many times have you heard someone say "Near the red leaf in the green tree," or "By the tall grass stem"? You look around and are confronted with dozens of trees with hundreds of red leaves or an entire field of grass. Which tree, which leaf, which stem? Which direction, how far? This person has forgotten that no one else can see from their exact perspective. They've also forgotten that what is absurdly obvious to them through their own binocular's tiny field of view is not at all obvious to anyone else confronted with a 360° view of the whole, wide world.

The Toughest Basic: Starting from the Obvious

Selecting the Obvious: So what's considered obvious? Here are some examples: a lone tree, bush, rock or structure; the largest, tallest, darkest, lightest of an assortment of such items; the only group of trees; the leftmost or rightmost tree in a line of trees; the only cloud in the sky; the sun; the only red house in sight; the only house on the left side of the road; the only green sailboat on the sea. Something unique (in the proper sense of one-of-a-kind).

Often the bird is in a flock which everyone has already spotted. "There's an Ominous Cleft-Toe in with that flock of warblers." They now know that you've seen the warblers, are not simply misidentifying one of them, and it helps someone who is way off target to know that they can first find a larger target (a flock) and then look for one individual.

Watch the Birdie: Keep your eye on the bird while giving directions: if it flies, you can follow it and give information about its movements ("going left through the foliage, watch for movement"). Often you can anticipate its movements, especially useful when someone is looking through a scope's small field of vision. If it flies out of sight, you don't waste your time telling people where the bird used to be.

Moving from the Obvious: Once you've gotten everyone looking in the same direction with your "see the big red house on the hill?", you can bring them along step-by-step to the bird. "OK, starting from the house, come down to seven o'clock $\frac{1}{2}$ way down the hill to a large brown rock with a big white spot on the bottom left side. Got that? OK, from four o'clock on the rock, go about three times the width of the rock to a round gray-green bush with a forked leafless stick pointing out ten o'clock from the center of the bush. The bird is on the left fork."

Occasionally someone "jumps the gun" on your instructions. They hear the first instruction, "See the big red house..." and immediately complain that they can't see the bird. Deal with this as best you can. We tend to steamroll right over such comments and restate, perhaps enunciating slightly more forcefully: "Now, starting from the red house on the hill, come down to seven o'clock...", and so on. We figure that getting many or most of the people on the bird is good for the first pass; there is always someone who wasn't listening or couldn't follow. If the bird stays put long enough, we try again.

Distance: Use fractions or multiples of an obvious dimension: $\frac{1}{2}$ way down the hill; $\frac{3}{4}$ of the distance from bottom to top of the tree; $\frac{1}{3}$ of the distance from trunk to the left edge of the tree; twice as high as that radio tower; $\frac{1}{2}$ way from the sun to the left edge of the lake. Although the size of the field of vision varies widely among binoculars, the number of binocular fields often works as a rough estimate, especially for small specks in the sky: "About two binocular fields 12 o'clock from the red house." Absolute distances such as 30 ft or 200 yards are of little use. Most

people are poor judges of distance or size, and we underestimate distances more often than overestimate. When you do give a distance, qualify it with a phrase like "about", "approximately" or "between" to indicate that this is a rough estimate. Saying "about 20 to 40 feet away" or "less than 50 feet" can keep people from searching in vain 500 feet away. The exact distance does not matter, it's the order of magnitude which is important. At sea, where people are looking at a lot of water, distance should be relative to the horizon. Hearing, "Plummeting Mackerel-Snapper, Ten o'clock, ½ way to the horizon," is a lot more useful than "500 meters off the port bow."

Practice this on your own, in your own mind. Assume your friends are down the trail when you spot the extremely rare and highly-prized Divested Widget and signal them. They come running. The bird is in the middle of a bunch of trees and bushes, not thrashing around, nor drawing attention to itself. Start from the obvious, and work your way to the bird, using the clock and relative distances. After a while, this sort of verbal guidance becomes close to second nature.

A starting point can be near or far from the bird, above or below, closer or farther. It only has to be OBVIOUS to everyone. Sometimes a building two miles away is the best point from which to start. Sometimes it's a knee high red flower 5 feet away. It could be a group of bushes halfway across a field. It could be a moving car, boat or airplane, or even another bird that everyone has already seen. It all depends on the situation.

Other Problems

Partially Obscured Birds & Parallax: Sometimes you see a bird through a hole in foliage or twiggy brush. It can't be seen except from exactly where you are standing. You can confirm this by moving a bit and seeing if the bird becomes obscured. In this case, you either hog the view for yourself, or you move aside and give someone else your spot. We recommend the latter. Birders are typically polite, and you'll rarely be criticized for staying put. But your courteous behaviour will be appreciated and you'll likely be helped in return sooner or later by legions of grateful fellow-birders. When a bird is likely to be obscured from points of view other than your own, and you sense that someone simply cannot see it from where they are standing, you can either advise them of this or physically move them into a better location. This is a matter of putting yourself into their shoes, which comes with experience.

Bird Colour, Shape, Orientation, and Relative Size: Sometimes leaves, grass or twigs obscure a bird, or it blends into the background. In these cases, giving a description of the relative size, colour, bill shape, or body orientation, e.g. "hanging upside down," can help. Woodpeckers often blend into the trunk or limbs to which they cling. Warblers are famous for moving through the canopies of leafy trees. Towhees and thrashers match their dead leaf feeding grounds in colouration. "Facing left, body almost horizontal, shoulder hunched, tail hidden" can get someone onto a well-camouflaged motionless bird.

Dealing with Beginners: The special problems beginners experience usually fade with time, so you've probably forgotten that you once had them too. Try to figure out their views and put them into perspective for them and others in the group. When one person says that he is looking at a "really big bird way up high" and others can't find the soaring eagle, the leader who sees where the beginner is looking can help by saying something like, "that robin ten feet up in the oak does look huge and high compared to the juncos on the ground we have just been watching." A statement like that explains the original observer's perspective to more experienced participants, helps the others to know what they are looking for (if they want to see the robin), teaches the beginner something about perspective and comparison, and probably won't be interpreted as an insult. A similar problem arises after looking at very small birds – sparrows or warblers for example – for a long time, and you then spot something larger like a thrush, and it looks enormous. Alternatively, watch geese for a while, and sparrows will look like gnats.

Wide Open Spaces: Reference points for birds flying across an open space (ocean, lake, marsh, desert, prairie, etc.) may be impossible. If you dare not stop looking, try giving these pointers:

- 1) Direction of flight (right, left, away, towards, etc.).
- 2) Height (at horizon, X binocular fields above horizon, directly overhead, etc.).
- 3) "Look at me and look where I'm looking."
- 4) Stand behind you and imitate your direction and height.
- 5) If available, reference obvious clouds, mountains, etc.
- 6) Get well "ahead" of bird's approximate location, and either wait for it to fly through your field of view, or sweep back towards the bird. This works better than trying to catch up to or hit directly on the current location.
- 7) Suggest a likely focal distance, although infinity usually works best. When you're far out-of-focus, you can look directly at a bird and still be unable to see it.

It Won't Always Work: You will not always be successful. Accept that. You're just birding, not solving world peace; keep your sense of humor about this. Some people are not listening, some are hard of hearing, some have vision problems, some may be angry about the coffee they spilled on themselves, and some have bad binoculars or dirty glasses. Sometimes you're off your own game, thinking about something else, short-tempered, irritated, too cold, too hot, or your brain just isn't working properly that day. That's life. Some people seemingly cannot follow directions from anyone. Some people can never learn to give them. Some of the best birders in the world are unable to give decent directions to anyone else, no matter what. And then there are those most fortunate and irritating few who seem to never need directions. They instantly see everything, everywhere, until you want to bonk them on the head from frustration with your own inability.

Main Points to Remember

If you learn these basics and pay attention to your own words, you'll find that you are actually practicing a form of mindfulness which benefits yourself as well as others. Start from the obvious: something they can't miss, unique in colour, shape, size, type, or direction. Use clock face directions. Identify which member of a group (e.g., 2nd tree from the right). Use fractions and multiples of visible and identified objects rather than absolute distances. Identify bird colour and other characteristics when needed. After a short while, you'll find it actually takes less time and energy to give good directions than to give poor ones. When others quickly get onto the bird, you don't have to keep repeating your inadequate directions. In the amount of time it takes to say, "It's right there, in the green tree," you can say, "Single oak, 8 o'clock, 50 meters, 9 o'clock at the foliage edge." And you will have said something useful.

And Finally – What Not To Say

There's no end to the list of unhelpful, frustrating and irritating directions one might give. And – like speaking to someone in a foreign language – emphasis, raising your voice and waving your arms around does little more than scare away the bird.

Here is a small sampling: It's right there. Just look. Over there. IT'S RIGHT THERE! There! No, there! Are you blind? It's right behind the green leaf.

Some useless directions are situation specific. For example: out there in the grass (in a large grassy field); on the phone wire (in a city forest of wires); on the pole (with dozens of phone poles stretching off to the horizon); on the bush (in the chaparral); on the water (from the beach). And the ever-favourite classic, frequently heard in the forest: it's in the tree, the green tree. You get the idea.

Getting into details of distance and size can mislead. "A foot high bird on a 100-foot boulder 500 yards away," can be really misleading when the bird is really a Rock Wren 50 yards away on a car-size boulder.

Americans and British travelling overseas should avoid our imperial system of inches, feet, yards and miles. Metric system users vastly outnumber us. Most Americans have a vague notion that a meter is about the same as a yard, so it's easy to stick to metres. Metric system users probably won't have a clue as to what an inch, foot or a mile means, nor will they see any point in learning unless they are aficionados of archaic systems of measurement.

When your knowledge of vegetation, rocks, soil, clouds and so forth is better than average, it's easy to assume your audience knows what you know. "It's in the Phalanopsis growing by the Dichrodendria next to that crumbled intrusion of franitactic gneiss," can be as useless as saying "over there" to the person who cannot identify those objects. And you just might use the wrong term, thus confusing those

that actually do know. Common English is best. It's probably safe to point out the sole oak in a stand of conifers, or a brick among the rocks, but don't assume too much.

And if you want to really irritate your birding mates, just give a lengthy description of the bird before giving any clue as to where you're looking. Make sure you pop in such exclamations as, "Oooh....Wow...what IS that?... It's soooo beautiful... Pleeese tell me what it is!", ad nauseam, finishing up with "well...it's....gcee... how can I – whoops!, it just took off! You missed it? Are you blind? It was right there...in the green tree!"

We wish to thank the following people who replied to our BirdChat and CalBird solicitations for comments: Brandon Best, Wim van Dam, Richard Danca, Roy John, David Spector, John van der Woude, Bob & Carol Yutzy. Buried somewhere in the verbiage above, you will find your suggestions, perhaps mutilated beyond all recognition.

Authors' Biographical Note: Chuck and Lillian live in a northern Los Angeles suburb where – when not peering at birds far and wide and jotting down notes – Lillian tends their ever-growing assortment of native California plants, fruit trees and vegetables, and maintains contacts with other humans. Meanwhile, Chuck practices piano, studies philosophy and edits the Santa Monica Bay Audubon chapter blog (where you can see other examples of their off-kilter humor, especially their controversial monograph on the Western Roof Owl). They've been birding for over thirty-five years and leading local bird trips for over twenty years. Now retired, they report that dinner time conversation is always "exciting and richly detailed" due to their previous careers as accountants.



Brown Pelican in California. Photo by Roy John.

Fifteen Minutes of Fame

Linda Jeays

How they glow
~Black-eyed Susans~
in the veiled pink-grey glimmer
of early morning.

Water

Roy John

Ottawa is blessed in many ways. One of these is an abundant supply of good water. The nearby Ottawa River is 1,271 kilometres long and drains an area of more than 146,000 square kilometres. It does not pass by any mega cities and so becomes the clean, soft source of Ottawa's drinking water. In two plants, Lemieux Island Water Purification Plant and Britannia Water Purification Plant, river water is turned into tap water. The latter plant site is best known to OFNC members as "Mud Lake" and is the best birding spot in the capital.

Manned by a team of trained professionals from the City of Ottawa, these plants are where river water is chlorinated, treated to remove colour (the Ottawa River is often brown from tannins, the product of leaf decay), suspended solids and particles, algae, vegetation, bacteria and viruses. Particle removal and filtration is followed by a two-stage disinfection process. On exit, chloramine is added as a stable and long-lasting disinfectant to maintain water quality as it travels to your tap. By the time it reaches your house there is enough residual disinfectant to keep you from harm.

To ensure these plants are operated properly there are numerous on-line measurements and checks made by the plant operators. In addition, thousands of

analyses are done each year. (The results are posted to the city's website – see <http://ottawa.ca/en/residents/water-and-environment/drinking-water/drinking-water-annual-reports-and-quality-test>.) The outcome is that we have water that is clear and safe to drink.

Tap water is regulated by the provincial government (Safe Drinking Water Act (2002)) so it meets the Ontario Drinking Water Standards (Ontario Regulation 169/03). This provides a comprehensive, multi-barrier safety net that protects drinking water from source to tap. This involves the measurement of hundreds of potential contaminants. Drinking water sources are tested frequently to make sure they are within these limits. The government provides an oversight program to make sure the results are valid. When Mike Harris was elected as Premier of Ontario, he promised to cut government spending and he did. What better place to cut than an oversight program whose results always showed zero? The result was the Walkerton tragedy. Sometimes, though, zero is a very good number so the oversight has returned.

Bottled water is designated as a food and falls under the Food and Drugs Act. Aside from arsenic, lead and coliform bacteria, this act does not set limits on contaminants but only states water cannot contain poisonous or harmful substances and must be prepared in sanitary conditions. The Canadian Food Inspection Agency (CFIA) conducts inspections of bottled water plants about once in three years. In essence the industry inspects itself.

Most bottled water comes from public water sources. It is filtered, thereby removing the protective trace of disinfectant, and bottled. The price leaps from tenths of a cent per litre to a couple of dollars, meaning you spend more per litre than you do for gasoline.

Bottled water is a poor environmental and economic choice. It can take as much as three litres to make a single litre of bottled water. The process uses almost a kilogram of fuel for a kilo of water and emits over 500 grams of greenhouse gases. Much of this is in the creation and transport of the plastic bottles. (One estimate calculated that for the USA, 17 million barrels of oil could be saved – that is enough to fuel over one million cars for a year.)

Theoretically some of the bottles could be recycled, but only about 20% actually are (maybe up to 30% in more enlightened places). The bottles themselves are generally safe, but if left in a hot car, then chemicals in the plastic may be leached into the water. Concern has been expressed over the possibility of dissolving toxic phthalates, DEHA, PET, PETE and antimony.

That being said, I do drink bottled water whenever I do not trust the local water supply. This has happened in India, South America and Africa. Even well-treated water in those places may contain organisms my body is not adapted to. I do not even brush my teeth in that tap water. In developed countries like the USA, UK, France, Germany, and on board many ships, I have always drunk the treated tap water without any problem, so I agree with David Suzuki when he said, "Buying bottled water is wrong." At least in Ottawa it is.

Mystery Mounds of the Macoun Club Study Area

Robert E. Lee

We were unaware of it at the time, but right in our own Nature Study Area, the Macoun Field Club was under surveillance. But what two dozen people were up to with such noise and energy on an unusually warm November day was impenetrable, even to the sharpest of bird brains.

I myself was too busy to notice. As fast as I could, I was supplying marked pieces of plastic cutlery to an endless succession of demanding hands. Especially acquisitive kids wanted handfuls of knives and spoons, but I was strict: just one at a time. As it was, I was racing just to print each child's initials and add a sequential number: ("What was your last one?"). Rain set in and my marker pen began to skip on the progressively wetter plastic. Finally I called a halt and looked to see what had been accomplished with so much running around.

Proud kids led me here and there to show me what they'd laid claim to – where they'd planted their flag, so to speak, sometimes as much as a hundred feet away. Some thought they'd stuck their marker in the biggest ant mound ever; others were sure they'd found more than anyone else. Together we'd tagged 50 of these big, dark brown domes of recycled swamp peat.

The launch of this new endeavor was modeled on the Macoun Club's own long-running Study Tree Project, which I wrote about in T&L a year ago (Vol. 49, pages 154-160). As with trees, the first part – labeling the mounds with members' names – was great fun for the kids. The second part was an interesting challenge for me. By the time I could go back to map the mounds, a little snow had fallen and, although most of it had melted, where it lingered our white plastic utensils had become nearly invisible. More troubling, someone had pulled out our knives and spoons and left at least some of them lying on top of the mounds. The unknown culprit had snapped a few in two – or even three pieces!



I examined the broken parts for tooth marks – my first suspect in this mischief was a Raccoon. But there was no indication of canines or molars. Finally, on one still snowy-topped mound I found Raven tracks. Happening to straighten up abruptly, I startled a passing Raven, which suddenly shied away out of sight. This experience was repeated a little later, and I realized I was still being watched, just as I now surmised the whole group had been. At that time the Raven must have been intrigued at seeing so many noisy humans far from their regular trails, running to and fro and sticking little white objects into the dark mounds. Now, to make a map before any more spoons disappeared, I quickly took radiating compass bearings and paced off the distances. Later, I used triangulation. But the Raven had satisfied its curiosity, and spoons were never disturbed again that way. Some are still there to aid us, eight years later.

We had made a start that November day, defining our field of study and establishing a means of making repeat observations, but what should we do next? Knee-high mounds may look more accessible than tall forest trees, but a tree wears most of its interesting features on the outside, an ant mound, on the inside.

Digging our way in proved to be very unsatisfactory. Whatever tunnels may exist disappear as the material crumbles. At finger depth, so few feeble brownish yellow

ants might – or might not – tumble into view that at first I wondered whether they were just incidental visitors, rather than builders. From these few specimens, however, I identified the ants as *Lasius minutus*, a species named by Carlo Emery in 1893, and confirmed that it is a genuine mound builder. I learned that it lives underground and feeds on the honeydew it collects from aphids – root aphids. I have since watched *Lasius* ants, when disturbed, plucking their herds of aphids off the rootlets and carrying them to safety.



Face of a worker ant *Lasius minutus*.
Illustration by Robert E. Lee.

For *Lasius* ants are gentle creatures that neither bite nor sting, and retreat rather than swarm an intruder. Even the name sounds friendly. They are perhaps the most abundant of ants in North America, but only one *Lasius* species is so well known that it has an English name, the Common Meadow Ant (*Lasius flavus*). We routinely find that one under rocks in old fields in our Study Area. *Lasius minutus* is relatively rare. The genus was the subject of a taxonomic revision by extraordinary naturalist E.O. Wilson in 1955.

He explained with great technical clarity how to distinguish the different species by examination under a dissecting microscope. I have identified a dozen species in our Study Area. A closely related genus, *Acanthomyops*, has since been reassigned to *Lasius*. It is covered by its own excellent identification key, which was published by M.W. Wing in 1968. Both can be found online.

Lasius minutus has the distinction of being the longest-lived insect known, a queen and her colony having been kept going in a laboratory for 29 years. Some of our mounds might be that old, or, conceivably, still older. If we could document the growth of our mounds, we might be able to estimate their ages. We went out to measure them and draw their profiles. Most, we found, are simple domes three or four feet across and 18 to 22 inches tall. A few are tall, narrow towers as much as 30 inches high, and many are sprawling, flat-topped, steep-sided structures up to eight feet across, but only 26 inches high.

Where do they get so much building material? It must come from the surroundings, of course, and sometimes from so near that the mounds are surrounded by 18-inch wide moats when conditions are wet. Under the microscope, the particles of peat look almost as if they'd been chewed up and spat out. If the ants really do add

something to the peat, that would account for a slight cohesiveness that preserves their subsurface tunnels against rain.

To learn more, we opened several mounds by cutting out big wedges with a hand-saw. The pieces were heavy and, being bound together by a pervasive meshwork of fine tree rootlets, came out intact, like pieces of dense chocolate cake. In most places, we had little to show for our efforts – just a few fumbling workers and sometimes larvae – but one mound was teeming with ants. It was 22 inches high and 40 inches across at the base. Six inches down we found some dozens of workers and root aphids. Another slice took us down to a depth of twelve inches, exposing hundreds of ants. Sixteen inches down, I started to count and then estimate. I concluded that 10,000 workers would be a conservative estimate for the colony.

Massed in hundreds, a lemony scent was detectable, but only at very close range, with our noses right up to the dirt. In another species, *Lasius claviger*, a single ant produces an even stronger, clearly citronella smell. It serves as both alarm signal and chemical defence.

After putting the slices of peat back and pinning them in place with long sticks, we later saw that the mounds had healed over, though the disturbed sections had sunk down an inch or so.

Each year, November slides into December and winter sets in. We long supposed that our ants had squeezed together in the very center of their mounds for warmth, and would be insulated from the deep cold of January by the thick bed of earth. But one spring when the last of the snow was melting, we cut open a medium-sized mound and discovered hundreds of worker ants (plus a dozen of their aphids) only five inches below the surface, all intermixed with ice crystals. The mound had frozen.

As another winter was approaching, one of our members obtained advice, equipment, and assistance from Professor Ken Storey at Carleton University. Ken is an old friend of the Macoun Club. At various points in his career he has come in to our meetings and told us about freeze tolerance in Wood Frogs and other animals. He asked for some of our ants. Dawn Seburn responded to his request and reported the results of his experiment at the 2012 ONFC Soirée (see T&L Vol. 46, p. 105) and again in the Macoun Club's annual magazine, *The Little Bear*:

We captured 21 worker ants from one of my mounds, DES-8, and then brought them to Ken's lab for testing. First he carefully cooled them to -5°C; then rewarmed them. They all survived. Then he re-cooled them to -11°C. They were all still alive when he warmed them up again. Then he took them down to -15°C. Only four survived; the other 17 died.

Dawn related his reasoning in her article: our ants are probably not *freeze-tolerant*, but rather survive mildly freezing temperatures in their mounds by super-cooling, probably by altering the water in their bodies so that it doesn't freeze unless the temperature drops to some much lower, lethal limit. The sugar they get from their aphids' honeydew would enable them to do this.

Professor Storey next suggested that Dawn monitor the temperature in one of the mounds to see how cold it gets inside during the winter. He provided her with thermocouples and she implanted them in her mound no. 8, bringing their wire leads out one side and bundling the loose ends up in a plastic bag. She further wrote that:

During the winter I went back several times with the device that takes readings from the thermocouples, plugged in the wires and read off the temperatures inside the mound. The top of the mound . . . did go a little below freezing, about -3°C . But the bottom . . . was always a little warmer than the top, and the top was nowhere near as cold as the outside air. And so the whole mound stayed a lot warmer than the coldest nights of the winter, which were around -29°C .

From September to May the mounds look lifeless, but by mid-June each year, it becomes evident that something is going on inside. The surface becomes covered with a light, almost fluffy layer of dirt up to three or four inches deep. This, we have learned by observation, is accomplished by individual worker ants that emerge from little holes, each of them carrying a tiny particle of peat. They walk a few steps and set it down, then re-enter the mound. These inconspicuous actions are repeated over and over, by thousands upon thousands of ants. Usually, they deposit this material over the top of the mound, but in some years it is added to the lower sides instead. Really vigorous mounds are covered from top to bottom.

This lovely, soft stuff must feel cool and pleasant to bare feet and furry bellies on hot days, for more than once we have seen certain mounds become dimpled and patterned with the footprints of Snowshoe Hare, Red Fox, or Eastern Coyote. In the flat, featureless swamp, these mounds must be valuable lookout posts, too.

There comes a day, or at least some very short period in July – we have been there to see it only once – when hundreds of workers appear on the new, soft surface and stream about back and forth in narrow columns. Several lines of ants may run somewhat parallel to each other and not far apart, but can also turn and branch without apparent reason. Ants that are hurrying one way bump into ants rushing the other, contest the right of way for a moment, and push past each other. A section of a column might be full of ants one moment, and seconds later nearly empty. It was one of those situations where it pays to get really close and observe minutely.

Patience revealed that an ant would emerge from some hole in the fluffy soil, join the thronging masses and run along, and then turn to deposit a single particle of peat

at the side of the column before running back. It was such an entrancing sight that a young fawn had half-climbed the mound to peer at it, leaving its dainty hoofprints pressed into the soft peaty soil.

The sides of the runways gradually rise, making channels, and must eventually arch over to form a roof, turning these little travelways into a network of tunnels. (We have seen another subterranean species, *Lasius umbratus*, that had constructed an earthen tunnel over bare rock.) The work of dumping peat particles on the outside of the mound continues for a little while longer, so that the tunnels become lightly buried and the mound presents a smooth, unmarked surface once more – but with a tunnel just underneath.

At the time this hidden network of special galleries is being built, still in July, digging six or eight inches down has revealed worker ants, the larvae of new workers, and most importantly – the purpose of the whole endeavour – the extra-large pupae of a generation that will go out and found new colonies. By early August, these reproductive castes move up into the waiting subsurface galleries to mature. Now they can be found just by scratching the surface.

The males, called drones, are smaller and darker than the queens, which themselves are about $1\frac{1}{2}$ times the size of the workers (4.5 mm vs. 3 or 3.25 mm). This is unusually small for a *Lasius* queen, giving rise to the specific epithet of *minutus*. Because they bear wings, they are called *alates*.

As an important but yet-to-be-determined date approaches, the workers open gaping holes above the subsurface galleries, and the alates begin to swarm in and out. It is all just practice, and for only a few minutes thousands of glittering, winged ants mingle with workers over the top of the mound. Suddenly, as if on signal, they will all disappear inside, but shortly all come back out again. Finally, after two or three weeks, all the colonies in the neighbourhood coordinate a mass flight during the last week of August. The queens mate and then set out to found new colonies. Once that has happened, we find the alates gone and the mounds apparently lifeless once more, still peppered with those large but now empty holes.

We have never yet managed to be on the spot when the mating flight takes place. We do not know whether the queens and drones come together within the swamp forest, just over the mounds, or whether they ascend in clouds above the treetops. Nor have we solved the lingering mystery of how a *minutus* queen starts her new colony.

The huge queen Carpenter Ant (*Camponotus*) can do it all on her own. She has the bodily resources to carve out a brood chamber, lay two dozen eggs, and forage for the resulting larvae until, as adult workers, they are able to take over the work. Alternatively, I have seen as many as seven much smaller queens of another genus (*Formica*) working closely together to excavate their first nest. But *Lasius* queens are neither big nor cooperative, and *Lasius minutus* are the smallest of all.



The mound-building ant, Lasius minutus: a worker (3 mm long) and winged queen (4.5 mm long). Illustration by Robert E. Lee.

Some *Lasius* species obtain help through what is called “temporary social parasitism.” This *sounds* innocuous, but generally entails a queen entering the established nest of another species and killing its queen. The host workers then labour for her until they all die out. That’s what makes it “temporary.”

On one occasion, we saw the beginning of the attack in the nest of some other *Lasius* species. I had lifted a stone in a nearby forest and there among the confused workers was a de-winged queen. (After mating, they land and chew their own wings off, leaving stumps – hence, dealate.) If, as the invading queen, she had been subtle for long enough to acquire the colony odour, she could have reached the host queen and perhaps killed her. This dealate, however, had been too hasty and was recognized as a threat; one of the colony defenders had clamped its jaws onto her hind leg and she was walking around with it fixed there. If the other workers should become sufficiently aroused, she would be killed.

Lasius minutus is itself a well-known victim. We have followed the inevitable process in our Study Area. Late in 2011, one in four workers in a *minutus* mound were offspring of an invading *Lasius speculiventris* queen (a species with a shining abdomen). Early the next year, eight out of 10 were. By 2013, the *minutus* line had been extinguished.

But presumably *Lasius minutus* also practices social parasitism. Among the collections E.O. Wilson examined in the 1950s was one series of specimens with a note saying that they had been taken from a *Lasius alienus* nest. That observation was made in 1885, and seems to be the only such hint that has ever come to light.

In 2015, we never got to see if our ants start as parasites. Everything had been on track for a typical launch – in the second-last week of August the alates were swarming over the mound tops – but I don’t think it ever happened. They retreated back inside.

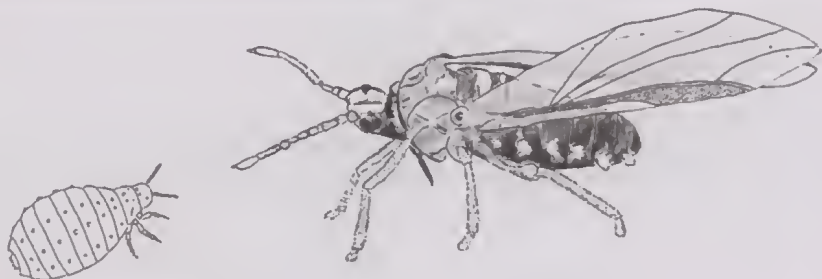
By late October, heavy rains had flooded the swamp, but some of the more determined Macoun Club members splashed out, only to report back to me, standing on high ground in my shoes, that winged ants were still to be found just under the surface. But among them, said Samantha, there were bluish insects in the mounds, too. *That* brought me out at a run.

Years before, back in 2009, I had captured some of the root aphids apparently being kept by the ants in their mound. Through contacts in the OFNC I found someone at Agriculture Canada who wanted my specimens. Eric Maw told me he’d have them DNA fingerprinted, “but it could take a while.”

I thought I was being very patient, but after a year could not resist calling him to see what they had turned out to be. “We don’t know,” he said. I reminded him that he was going to have them DNA fingerprinted. “We did, but they didn’t match anything.” His results, he said, at least ruled out the two most common ash-feeding

species in the aphid genus *Prociphilus*, but they could be one of the two uncommon ones. What he now needed were adults, so that they could be keyed out the old-fashioned way. Everything I had brought him was an immature.

For seven long years, spring, summer and fall, I had been poking into the mounds, looking for adults and always finding plump, white immatures. But when, in 2015, I heard that there were bluish insects in the top of the mound, I immediately thought of the way the waxy wool on some aphids makes their dark bodies look bluish. And I was right; there they were, just as ready to fly and presumably as stalled, as the winged ants. I kept some alive over the weekend and took them in.



*Root aphids (Prociphilus sp.) kept by Lasius minutus in its mounds:
an immature (1.5 mm long) and
an adult (2.5 mm, not counting wings) about to leave.
Illustration by Robert E. Lee.*

I told Mr. Maw that I thought I could distinguish males and females. “No,” he said. “there wouldn’t be males or females.” I was puzzled; weren’t they adults? Oh, yes, he said, but the males and females are something different yet again, being very small things firmly attached to the host plant roots – not easily seen. Apparently these aphids, like other similar insects, have weird loops in their life cycle that circle around outside the standard egg-larva-pupa-adult formula we all learn in school. As for the adults I had brought him, whether they could be identified at all would depend on whether the taxonomic keys had been built on spring adults or fall adults. My specimens – fall adults -- would have to be prepared (I think that means having their opaque bodies cleared and mounted on microscope slides). He’d also have them DNA barcoded again to make sure they were the same species as before. “It could take a while,” he said, casually repeating his own words of seven years earlier.

Whatever they are, the aphids may turn out to be key to the whole future of our ant mounds. If the aphids are host specific, feeding only on ash roots, then our *minutus* ants could be doomed. By 2013, the Emerald Ash Borer had invaded the swamp and by 2016 many of the trees there had died, their inner bark eaten away by the larval borers. Some of the mound colonies that had been active for years, under our observation, appeared to have died, too.

It would be a shame if all of our invisibly teeming mound colonies should become lifeless hulks. There is so much to be learned, so many mysteries to investigate. Twice, spring and fall, we have seen dealate queens in the mounds; were they invaders? Some mounds have grown since 2009 – Dawn's no.8, for instance, has expanded from 42 to 60 inches wide, despite having been cut wide open to insert thermocouples. That works out to a doubling of volume in seven years. But the mounds of other active colonies have remained the same size. How old are they? How long can they last? Will the colonies, as living things, be there next year?

Notes and references:

The life history presented here has been assembled out of sometimes singular or fragmentary observations, and enough variation has been seen to warrant caution in assuming the pattern is so simple or regular.

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Notice on Access to the Causeway at Shirley's Bay

On behalf of the OFNC I'm happy to announce that we have a new five-year agreement with the Department of National Defence to allow members to access the causeway for wildlife viewing at the Shirley's Bay causeway. As with our previous agreement, members must call the Range Control Office (613-991-5740) and identify themselves as members to access the property.

Chris Traynor
Chair, Birds Committee



Birders at Shirley's Bay. Photo by Nina Stavlund.

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Coming Events

PLEASE NOTE: The OFNC website (*ofnc.ca*) contains the most up-to-date information on events. Please check it regularly for additions or changes to events. The Club's Facebook page (www.facebook.com/groups/379992938552/) and Twitter account (@*OttawaFieldNat*) may also be used to announce last-minute changes to events.

We expect to have several weather- and year-dependent events that are not included in *Trail & Landscape* and will only be announced at the last minute via our website, Facebook and Twitter. These include seasonal events such as Snowy Owl viewing, the spring Snow Goose spectacle, Eardley Eagles, etc.

ALL OUTINGS: Field trips to natural areas in our region and beyond take place all year round. OFNC events are for members only. Prospective members with interest in attending should contact the trip leader in advance. For some events, participation is limited and members will be given priority. All participants will be asked to sign a waiver. Times given for events are departure times. Please arrive earlier, as leaders start promptly. If you need a ride, please contact the leader.

Please bring a lunch on full-day trips and dress according to the weather forecast and activity. Please always wear long pants and closed-toe shoes. Binoculars and/or spotting scopes are essential on all birding trips. Unless otherwise stated, transportation will be by carpool.

MONTHLY MEETINGS: Our monthly meetings are held in the **K.W. Neatby Building, Salon B, at 960 Carling Avenue**. There is ample free parking in the lot on the west side of Maple Drive by Carling Ave., immediately to the east of the main entrance to the Neatby Building. Monthly meetings are open to the general public.

EVENTS ORIENTED TO ALL AGES: Kids are welcome on all of our trips. We highlight some hikes as "oriented to all ages" as these are most likely to be enjoyed by typical children. Depending on your child(ren)'s interests and stamina, please feel free to bring them along on any events. For events tailored to kids, check out the Macoun Field Club (<http://www.ofnc.ca/macoun/index.php>).

**Saturday
October 1
10:00 a.m.
to
3:00 p.m.**

MUSHROOMS OF MACSKIMMING

Meet: Pioneer Village (Trails End) Field Centre's Inn, 3685 Wilhaven Drive, Ottawa. Prepare for 3 minute walk to the Village.

Description: MacSkimming Outdoor Education Centre in Cumberland is having its annual "Open Trails" open house event. It is the only day when the public may explore these Ottawa-Carleton District School Board lands. OFNC members and the public are invited.

This year, we have an opportunity to explore the property in conjunction with Les Mycologues amateurs de l'Outaouais (MAO). The MAO is a mushroom-specific club that is primarily active on the Quebec side of the Ottawa River, but will be joining the OFNC on this day so we can share in their knowledge, enthusiasm and experience for mushroom hunting.

Useful items to bring include: mushroom field guide, hand lens, field knife, small basket (like fruit basket), pencil and paper, brown paper sandwich bags. Bring a lunch, your curiosity and dress appropriately for the weather. This activity will occur rain or shine.

The Centre is a diverse site, including a marsh by the Ottawa River, agricultural fields in series of successional stages, red maple swamps and mature mixed-forest. You are also welcome to explore the Centre. For more information:

<http://www.ocdsboutdooreducationcentres.ca/>. The coordinator of this event for the OFNC is Jakob Mueller; if you have any questions, feel free to contact him at (613) 314-1495 or [jm890_7 \(at\) hotmail.com](mailto:jm890_7@hotmail.com).

**Sunday
October 9
8:00 a.m.
to
noon**

DUCKS AND GULLS ALONG THE RIVER

oriented to all ages

Leader: Roy John

Meet: Lincoln Fields Shopping Centre, northeast corner of parking lot, Richmond Road at Assaly Road, near Pizza Pizza

Description: Stop or stops along the Ottawa River, depending on what has been sighted and where, to look for Fall migrants. This is a rain or shine walk, so dress for the weather. Bring binoculars, a scope if you have one, a drink and a snack.

**Tuesday
October 11**

**7:00 p.m.
Social**

**7:30 p.m.
Presentation**

**OFNC MONTHLY MEETING
BIRDS OF THE GALAPAGOS**

Speaker: Justin Peter

Location: Salon B, K.W. Neatby Building, Central
Experimental Farm, 960 Carling Avenue

Description: The Galapagos Islands are often touted as a laboratory of evolution by natural selection, and some of the archipelago's birds are among the best-studied organisms anywhere. In this illustrated talk, Justin will help us get acquainted with some of these birds. We'll see what they look like and how they behave, as well as gain insights into their origins through some of the latest research findings stemming from decades of research.

Monthly meetings are open to the general public.

**Thursday
October 20**

**7:00 p.m.
to**

8:30 p.m.

PALEOENVIRONMENTAL HISTORY OF OTTAWA

Presenter: Greg Froude

Location: Fletcher Wildlife Garden Interpretation Centre

Description: Greg is a Carleton University graduate student in Earth Sciences who has experience leading field trips as a Teaching Assistant with both Memorial University of Newfoundland and Carleton University. As the former Geological Association of Canada-Newfoundland Division Vice-President, he was expected to give public outreach lectures and field trips about local eastern Newfoundland Paleozoic palaeontology. He also has 13 years of experience giving lectures as an Interpreter and Resident Geologist of the Johnson GEO CENTRE located in St. John's, Newfoundland. Now, having lived in Ottawa for a year, he hopes to bring his previous experiences as a passionate lecturer to introduce a broad-spectrum view to the discipline of palaeontology and to highlight the paleo-environmental history of Ottawa using photos and information collected over the past year.

Sunday
October 23
9:00 a.m.
to
4:30 pm

GEOLOGICAL TOUR OF OTTAWA

Leaders: Greg Froude and Martha Farkas

Mect: W. Erskine Johnston Public School, 50 Varley Dr., Kanata.

Description: This site is a wonderful exposure to Precambrian shield metamorphic paragneiss with various generations of both mafic and felsic igneous intrusions. After examining this "basement rock" the participants will visit other sites representative of different layers of sedimentary rock which accumulated in the various paleoenvironments that existed in Ottawa during the Cambrian to Ordovician. Participants will get introduced to, discuss and apply various Earth Sciences topics including paleontology, sedimentology and stratigraphy, mineralogy, as well as basic metamorphic and igneous petrology. All sites go ahead regardless of weather. Bring a lunch, something to drink, dress for the weather and wear comfortable walking shoes/boots.

Tuesday
November 8
7:00 p.m.
Social
7:30 p.m.
Presentation

OFNC MONTHLY MEETING

WEIRD, WILD AND WONDERFUL – CARNIVORES, PARASITES AND OTHER UNUSUAL PLANTS

Speaker: John Alexander and Peter Kaellgren

Location: Salon B, K.W. Neatby Building, Central Experimental Farm, 960 Carling Avenue

Description: John and Peter began exploring nature together in 2003. A suggestion from friends had them looking for wild orchids after a visit to Purdon Conservation Area in 2011. In their quest to document the wild orchids of Ontario, they have found many other unusual and intriguing plants. In *Weird, Wild and Wonderful – Carnivores, Parasites and other unusual plants* John and Peter will introduce you to some of our unique botanical curiosities. And the Wonderful? Of course it will be orchids.

Monthly meetings are open to the general public.

Sunday
November 13
10:00 a.m.
to
1:00 p.m.

GILLIES GROVE WALKABOUT

Leader: Owen Clarkin

Meet: Gillies Grove main entrance at the west end of Ottawa Street, around 100m west of Harrington Street in Arnprior. Coordinates: 45.439221, -76.358559

Description: Gillies Grove in Arnprior has the distinction of being one of the few old-growth forests in Ontario containing an original stand of our provincial tree: White Pine (*Pinus strobus*). Full sized pines in the range of 110'-140' tall are the highlight of this small forest, and many impressive specimens of other trees such as Sugar Maple, Hemlock, etc. are also to be found. This event will focus on showing not only the magnificent large specimens of various trees present, but also highlight the biodiversity located in this relatively small woodlot at the edge of the Ottawa district. Bring a lunch and something to drink. This is a rain or shine outing, so dress appropriately.

Tuesday
December 13

7:00 p.m.
Social

7:30 p.m.
Presentation

OFNC MONTHLY MEETING A WHALING WE WILL GO!

Speaker: Roy John

Location: Salon B, K.W. Neatby Building, Central Experimental Farm, 960 Carling Avenue

Description: Join Roy and Stephanie on a trip along Mexico's Baja coast into the Sea of Cortez looking for whales and other marine animals. While the land is arid and life is sparse, the sea is rich in plankton and attracts birds, fish, turtles, pinnipeds - and whales. Some species use the warm coastal waters to give birth. Now we have stopped slaughtering for profit, these giant animals have become friendly, allowing for close, personal encounters.

Monthly meetings are open to the general public.

**Tuesday
January 10**

**7:00 p.m.
Social**

**7:30 p.m.
Formal
program**

**OFNC MONTHLY MEETING
138th ANNUAL BUSINESS MEETING**

Location: Fletcher Wildlife Garden Interpretive Centre

Description: The Council for 2017 will be elected at this meeting. There will be a brief review of the activities in 2016 and a statement of the Club's finances will be given. This is an opportunity to meet most of the Club's executives and the chairs of the various committees and to find out what makes your Club tick.

**Saturday
January 14**

**7:00 p.m.
to
10:00 p.m.**

**FOURTH ANNUAL MEMBERS' PHOTO NIGHT
*oriented to all ages***

Leaders: Barry Cottam and Hume Douglas

Location: K.W. Neatby Building, 960 Carling Ave.

Description: If you take natural history photos, this is your opportunity to share some of your images with fellow members. The mix of different topics and voices makes for an enjoyable evening. Contributions may be 7-10 minutes long. We can handle most digital presentations (images on a flash-drive), and even conventional slides (with some warning please). We encourage presenters to speak about their images. Please contact Hume Douglas (humedgl (at) gmail.com) or Barry Cottam (b.cottam (at) rogers.com) so that we can organize the presentations. Participants will be invited to share their favourite photos in our OFNC blog note on the event.

**Saturday
February 25**

**7:00 p.m.
to
10:00 p.m.**

**OFNC AWARDS NIGHT
*Especially Kid-Friendly***

Location: St. Basil's Parish Church, 940 Rex Avenue, Ottawa. Enter from Maitland Avenue (east side) just north of the Queensway.

Description: Join us for some fun at our annual wine and cheese party and celebrate with the honoured winners of our Annual Awards. Photographers and artists will exhibit their works for everyone to enjoy; the judged photo display will be digital only. Kids, bring your natural history displays.

More details will be available in the next issue of *Trail & Landscape*.

ANY ARTICLES FOR *TRAIL & LANDSCAPE*?

Have you been on an interesting field trip or made some unusual observations?
Write up your thoughts and send them to *Trail & Landscape*.

DEADLINE: *Material intended for the January-March issue must be in the editor's hands by November 1, 2016. Send your articles to:*

Annie Bélair

email: annie.TandL@gmail.com

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